

Table 39b

**Distribution of contribution of purchasing external research and development to IT-based innovation among innovators, by selected company characteristics: 2001**

(Percent distribution)

Characteristic	Total	Contribution			Nonresponse
		No or small	Moderate	Large	
Innovators <sup>1</sup> .....	100.0	34.1	44.5	19.7	S
IT.....	100.0	41.1	46.0	11.8	S
Manufacturing.....	100.0	34.1	49.6	14.8	S
Communication.....	100.0	35.2	46.9	15.8	S
Computer related services.....	100.0	45.2	44.4	9.6	S
Non-IT.....	100.0	32.3	44.1	21.7	S
Manufacturing.....	100.0	32.4	46.1	19.6	S
Transportation & public utilities.....	100.0	32.5	40.2	23.9	S
Finance, insurance & real estate.....	100.0	30.6	41.5	26.5	S
Engineering & AAB services.....	100.0	39.1	45.1	14.7	S
By revenue size					
\$2.5M to \$4.9M.....	100.0	31.7	44.9	20.9	S
\$5M to \$9.9M.....	100.0	32.7	43.7	22.9	S
\$10M to \$24.9M.....	100.0	33.3	49.1	15.0	S
\$25M to \$50M.....	100.0	40.8	40.3	S	S
Above \$50M.....	100.0	40.0	39.3	20.1	S

<sup>1</sup> To be classified as an innovator, the company had to indicate that it had developed a product or process in the past 12 months or believed it would develop a product or process in the next 12 months as a result of IT-based innovation. The survey was conducted during the period July 2001–April 2002.

**KEY:** IT=information technology; AAB=accounting, auditing, bookkeeping; S=suppressed for reasons of reliability due to receiving less than 20 responses

**NOTES:** Responses are to question 15a: "On a scale of 1 to 10, where 1 indicates no contribution at all and 10 indicates a significant contribution, to what extent does purchasing external research and development, including software development contribute to your company's IT-based innovation?" This question was only asked of innovators. The category "No or small contribution" represents a response of 1, 2, or 3 to this question. The category "Moderate contribution" represents a response of 4, 5, 6, or 7 to this question. The category "Large contribution" represents a response of 8, 9, or 10 to this question. Total nonresponse consists of item nonresponse and don't know responses. Percentages are based on unrounded frequencies and may not total 100 due to rounding.

IT is defined as the hardware and software that support the production or use of computer-based information systems, the infrastructure necessary to access such information systems, or data processing services. Companies are classified as IT or Non-IT based on their 4-digit SIC number. IT Manufacturing includes companies with SICs of 3571-3579, 3651, 3661-3679, 3695, 3823-3826. IT Communication includes companies with SICs of 4812-4822, 4832, 4833, 4841-4899. IT Computer related services includes companies with SICs of 7371-7379. Non-IT Manufacturing includes companies with SICs of 2011-3569, 3581-3648, 3652, 3691-3694, 3699-3822, 3827-3999. Non-IT Transportation & public utilities includes companies with SICs of 4011-4231, 4412-4789, 4911-4971. Non-IT Finance, insurance & real estate includes companies with SICs of 6011-6036, 6081-6153, 6159, 6162-6799. Non-IT Engineering & AAB services includes companies with SICs of 8711, 8721.

**SOURCE:** National Science Foundation, 2001 Information Technology Innovation Survey.